**Terms of Reference**

**Malawi Longitudinal School Survey (MLSS)**

**Data Visualization Consultant**

**Purpose:** The Malawi Longitudinal Schools Survey (MLSS) is the first nationally representative, multi-round sample of primary school conditions, practices and learning outcomes in a low-income country. The Data Manager (Consultant) will manage cleaning, collation and storage of MLSS data, and produce descriptive statistics and analysis based on the data as part of preparation of a range of papers and academic outputs.

**Background:** Established in 1944, the World Bank Group is one of the world's largest sources of funding and knowledge for development solutions. In fiscal year 2017, the Group committed $59 billion in loans, grants, equity investments and guarantees to its members and private businesses, of which $19 billion was concessional finance to its poorest members. The vision of the Group is the eradication of extreme poverty and the promotion of shared prosperity by fostering income growth of the bottom 40 percent in each country.

The Government of Malawi (GoM) aims to provide equitable access to an adequate and safe learning space to all learners. In accordance with the GoM’s goal, the Malawi Education Sector Improvement Project’s (MESIP’s) main objective is to improve the equity and quality of primary education service delivery in early grade levels with an emphasis on improved accountability and functioning at the school level. MESIP includes a set of interconnected interventions, including: (1) performance-based grants to schools for improvements in retention; (2) a pilot School Leadership Program providing training to head teachers, deputy head teachers, and sub-district officials on how to improve management of schools in conditions of resource scarcity, achieve inclusive school cultures, and improve learning outcomes; (3) a pilot of real-time app-based data collection of key school indicators, with feedback ‘report cards’ for school leaders; (4) a pilot of regular SMS-based community feedback on schools via a dedicated platform; and (5) results-based finance to government on achievement of improvements in promotion and staffing in key disadvantaged districts.

MESIP is designed to include rigorous experimental impact evaluation of the majority of its activities. This is achieved through an independent school survey, the Malawi Longitudinal Schools Survey (MLSS), conducted in three rounds during the project. Baseline data collection took place during April-October 2016 and April-July 2018, and midline data collection from November 2018 – January 2020. Endline data collection began in April 2021 and is scheduled to be completed in all schools in 2021/22.

The MLSS is conducted by the World Bank in partnership with the Government of Malawi. Data collection is carried out by partner firms, with intensive collaboration with Government in design of survey instruments, cleaning and collation of collected data. The data collected is a valuable resource for the Government of Malawi, not only for impact evaluation of MESIP interventions, but for education planning and policymaking.

This Terms of Reference is for a Consultant to prepare an online tool for visualization of the MLSS data, enabling users to explore key indicators and trends over time.

**Responsibilities:**

**Task 1: Proposal/inception report**

The consultant will provide a detailed proposal/inception report with key details of the planned approach to setting up of the online dashboard, including: software to be used for database management and visualization; hosting and server requirements; organization/user interface; and mock-ups of example visualisations.

*Deliverable 1: Detailed proposal/inception report*

**Task 2: Set up online visualization dashboard for MLSS data.**

The consultant will develop and establish an online, web-based dashboard for visualization of MLSS data. The consultant will lead in all aspects of the setting up of the dashboard, including selection of hosting and database software; coding; and uploading/population of data. The dashboard will have the following characteristics:

* Enable visualization of key MLSS indicators over time (across rounds) and across space (region/district)
* Enable browsing of key indicators by level (school/teacher/student), topic (e.g. infrastructure, facilities, procedures, student profiles, learning outcomes)
* Additionally present background information on the MLSS and associated impact evaluations (provided by Task Team) including instruments, sampling, and interventions
* Facility for administrators to add additional data for existing indicators from future rounds of MLSS/other sources
* Facility for higher-level administrators to add new indicators in future
* Ability for administrators/’power users’ selected by administrators to extract visualizations for use in analytical outputs

Support with arrangement of hosting, including server and web domain, will be provided by the Task Team and costs relating to hosting will not be borne by the consultant.

*Deliverable 2: Complete and operational dashboard*

**Task 3: Prepare dashboard documentation for both users and administrators**

The consultant will prepare simple documentation on the functioning of the online dashboard, included in a ‘help section’ on the dashboard to enable users to better use the system; and basic documentation on the administration of the dashboard to enable administrators to add new data, export visualizations, and perform other key functions.

*Deliverable 3: documentation on dashboard functions for both users and administrators*

**Task 4: Sensitization on dashboard for administrators and key users**

The consultant will conduct 1-2 workshops of one day each introducing the dashboard to administrators and key users, including demonstration of key functions, and potential problems and how to address them. The sensitizations will be completed via videoconference and no travel will be required.

*Deliverable 4: Brief report on completed sensitizations.*

**Timeframe and Reporting:**

The consultant will report to the TTL Salman Asim (Senior Economist) and work with support and guidance of Malawi Education team.

The consultant will work remotely. The appointment is on part-time basis for 60 contracted days to January 31, 2021.

**Selection Criteria:**

* Master’s Degree in statistics, mathematics, economics, or another field with strong quantitative content
* 5-8 years’ experience in data management, analysis or presentation of complex datasets
* Experience in preparation of online dashboards and visualization of complex data
* Advanced technical skills in Stata; R; and Tableau
* High motivation and initiative, ability to work effectively with light supervision and meet deadlines and quality standards
* Ability to work under pressure and work flexibly on a range of assignments, to adjust to changing needs, and to prioritize among evolving tasks
* Ability to be based in, or travel frequently to, Washington, DC as required during duration of contract

The World Bank Group is committed to achieving diversity in terms of gender, nationality, culture and educational background. Individuals with disabilities are equally encouraged to apply. All applications will be treated in the strictest confidence.